

APPARATUS FOR FORMING FILM IN SEMICONDUCTOR PROCESS AND METHOD FOR FEEDING GAS INTO THE SAME APPARATUS

5 FIELD OF THE INVENTION

The present invention relates to an apparatus for forming a film on a wafer and a gas-feeding method relative to the apparatus, and more particularly to an apparatus for forming a film on a wafer and a gas-feeding method relative to the apparatus without contamination problem.

10 BACKGROUND OF THE INVENTION

Chemical vapor deposition (CVD) process is a usual method for forming a film on a wafer. It employs chemical reactions by reacting gaseous reactants in the chamber to form solid products. Then, the solid products are deposited on the wafer to form the film. Compared with the
15 film formed by other methods, the film formed by chemical vapor deposition process has better crystalline property, stoichiometry, and step coverage effect. Hence, chemical vapor deposition process is a prior and major method to form a film made of any materials, e.g. conductive materials, semiconductive materials, and dielectric materials.

20 The temperature required to execute chemical vapor deposition process is much higher than room temperature in order to provide enough activation energy to proceed chemical reactions. The reaction temperature is usually ranged from 400°C to 850°C. Hence, the great temperature difference between the interior and the exterior of the
25 chamber will cause serious problem and should not be ignored. Please refer to Fig. 1(A) which is a schematic diagram showing a typical chemical vapor deposition reactor 1. The reactor 1 mainly includes an